REMARKS

Status of the Claims

Claims 5-8 stand rejected. Claims 1-4 and 9-40 were previously cancelled, without prejudice. In this response, claims 5, 7, and 8 are amended and claim 41 is added, without introducing new matter.

Accordingly, claims 5-8 and 41 are pending.

Rejections under 35 U.S.C. § 102

Claims 5-8 are rejected under 35 U.S.C. § 102(e) as being anticipated by Dubin et al. (U.S. Pub. No. 2003/0134047) (hereinafter "Dubin"). The applicant respectfully request reconsideration of this rejection for at least the following reason.

The subject matter of Dubin relied upon by the examiner to reject clam 5 is not available as prior art as it was not invented by "another" as evidenced by the attached affidavit submitted under 37 C.F.R. § 1.132, signed by both inventors.

For at least this reason, claim 5 is allowable over Dubin. Claims 6-8 and new claim 41 depend from claim 5, incorporating its recitations. Thus, for at least the same reason claim 5 is allowable, claims 6-8 and 41 are likewise allowable.

Rejections under 35 U.S.C. § 103

1. Segawa/Yokoyama

Claims 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Segawa et al. (U.S. Patent No. 6,638,564) (hereinafter "Segawa") in view of Yokoyama et al. (U.S. Pub. No. 2004/0045502) (hereinafter "Yokoyama"). The applicant respectfully request reconsideration of this rejection for at least the following reason.

Segawa is cited for the proposition that it allegedly teaches a chamber, a plurality of tanks, and a piping system, while Yokoyama is cited for the proposition that it allegedly teaches using in-line heaters, which Segawa fails to teach.

Yokoyama, however, has an earliest effective date as prior art under 35 U.S.C. § 102(e) of August 26, 2003, while the invention date of the subject matter of claims 5-8 precedes that date as evidenced by the attached declaration under 37 C.F.R. § 1.131, signed by both inventors, along with photocopies of the supporting documents that are provided herewith. In particular, the declaration along with the photocopies of the supporting documents show that the subject matter of claims 5-8 has a conception date at least as early as July 8, 2003, and subsequent diligence beginning at least prior to the earliest effective date of Yokoyama (August 26, 2003) until filing of the subject patent application on January 22, 2004. Therefore, the invention date of the subject matter of claims 5-8 predates the effective date of Yokoyama, disqualifying Yokoyama as prior art under §103(a)/102(e).

As Segawa alone fails to render claims 5-8 obvious under 35 U.S.C. § 103(a), reconsideration of the rejection of said claims is respectfully requested. Additionally, new claim 41, which depends from claim 5, is allowable for at least the same reason claim 5 is allowable.

2. Segawa/Henry/Talmey/Morcos/Shacham-Diamand

Claims 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Segawa in view of Henry (U.S. Pat. No. 6,727,680) (hereinafter "Henry"), Talmey et al (U.S. Pat. No. 2,941,902) (hereinafter "Talmey"), Morcos (U.S. Pat. No. 6,500,482) (hereinafter "Morcos"), Shacham-Diamand et al (U.S. Pat. No. 6,065,424) (hereinafter "Shacham-Diamand"). The applicant respectfully request reconsideration of this rejection for at least the following reasons.

Claim 5 is directed to a system including, among other things, a piping system including a plurality of in-line heaters for a subset of the segments, to separately route, in-line heat, and after heating, mix to form the plating solution, substantially just prior to application, the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent. Accordingly, the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent are not heated and then mixed until just prior to application. Prior thereto, the tanks hold the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent unmixed and unheated, which may minimize particle formation. See Application as filed, p. 4, lines 15-16. Therefore, when viewed as a whole, the invention as claimed is directed to a novel system that avoids particle formation by avoiding processing of pre-plating solution elements (a metal and one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent) until such time a plating solution is needed, at which time pre-plating elements are heated and then mixed to form the plating solution.

As discussed herein, claims 5-8 and 41 are allowable over Segawa alone at least because Segawa fails to teach every recitation thereof. At a minimum, Segawa fails to teach or suggest separately routing, in-line heating, and after heating, mixing to form a plating solution, substantially just prior to application, the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent. Rather, Segawa holds solutions separately in heated tanks, remaining continuously heated. *See* Segawa, 18:5-14 ("The cobalt chelating solution 51a is kept heated by a heater 52a . . . [and] maintained at a predetermined temperature"). Moreover, Segawa's failure is explicitly conceded in the Office Action. *See* Office Action, p. 6-7, bridging sentence.

None of Henry, Talmey, Morcos, and Shacham-Diamand cure the deficiency of Segawa, and so, claim 5 remains allowable over Segawa even if combined with any one or more of said references.

Henry discloses continuously heating a pre-mixed plating solution until it is used for processing. Henry's system includes a tank 10 and a heated recirculating loop 14/18/20/22 to keep the plating solution "at an elevated temperature." *See* Henry, 5:32-42 and 6:14-15. Nothing is Henry suggests refraining from heating separate elements of a plating solution (a metal and one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent separate) until substantially just prior to application.

The other references similarly fail to remedy Segawa's deficiency. Talmey similarly discloses a pre-mixed plating solution held at an elevated temperature (130°C) until the solution is used for processing. *See* Talmey, 4:32-37. Morcos discloses a pre-mixed plating solution that is recirculated and heated/cooled on a "regular or continuous basis." *See* Morcos, Abstract. Shacham-Diamand discloses heating a pre-mixed plating solution. *See* Shacham-Diamand, 6:26-48 with reference to FIG. 1.

Clearly, none of these references, whether alone or in combination, can be said to teach or suggest separately routing, in-line heating, and after heating, mixing to form a plating solution, substantially just prior to application, the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent. Therefore, claim 5 is allowable over Segawa even if combined with one or more of Henry, Talmey, Morcos, and Shacham-Diamand.

Claims 6-8 and new claim 41 depend from claim 5, thereby incorporating the recitations set forth therein. Accordingly, claims 6-8 and new claim 41 are allowable over Segawa, Henry, Talmey, Morcos, and Shacham-Diamand, whether individually or in combination, for at least the same reason claim 5 is allowable.

CONCLUSION

In view of the foregoing, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (503) 796-3756.

If any fees are due in connection with filing this paper, the Commissioner is authorized to charge Deposit Account No. 500393.

Respectfully submitted,
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